

# EXPANDABLE BAIT SLEEVE AND METHOD THEREFOR

## FIELD OF THE INVENTION

This invention relates generally to fishing aids and, more specifically, to an expandable bait sleeve and method therefor capable of expanding in order to securely retain baits of various sizes and dimensioned to be coupled to a fishing line and a fishing hook in order to improve a fisherman's chances of catching a fish by minimizing the chance that a fish will be able to "steal" the bait without being caught on the hook.

## BACKGROUND OF THE INVENTION

Fishing is not only a popular pastime but also a commercial industry, as well as a sport. All those that fish generally use a form of bait to lure a fish to some sort of hook. Many fishermen, especially those who do so recreationally, attach various kinds of baits to hooks which are in turn attached to a fishing line that is coupled to a fishing rod. Catching a fish with a fishing lure is essentially a two-step process: first one must attract the fish with a lure by using a good bait, and then one must actually snare the fish on a hook while the fish is trying to eat the bait. There are many companies who market different fishing lures to attract fish, leaving fishermen with the dilemma of how to attach a bait to a hook in such a way that the bait will stay on the hook during casting, while in the

water, and while a fish is eating it. Some baits, both live and artificial, are fragile, thus contributing to the difficulty of securely attaching the bait to a hook.

There have been various attempts to use holders of some kind to secure bait to a hook. For example, U.S. Patent No. 4,961,280 issued to Hudson discloses a transparent member for encasing the hook and the bait and a sealing means for sealing the bait and hook in the transparent member. The Hudson patent presents several problems, however. First, the sealing member prevents fish from being able to nibble on any portion of the bait, since it is entirely encased in the transparent member. Additionally, the transparent member is fixed in size and therefore unable to retain bait by means of frictional engagement. U.S. Patent No. 4,788,788 issued to Brockett discloses a catfish bait holder that utilizes a hollow cylinder and a cylindrical sponge to keep bait inside. The Brockett cylinder is designed for use with a viscous bait, not live or standard artificial baits. Like the Hudson patent, the Brockett cylinder is fixed in size and is therefore unable to expand to hold both larger baits as well as smaller baits.

A need therefore existed for an expandable bait sleeve capable of expanding while at the same time securely retaining baits of various sizes so that the expandable bait sleeve can be coupled to a hook in order to improve a fisherman's chances of catching a fish by minimizing the



first end and a second end, the first end is open and dimensioned to receive a portion of a bait, wherein the sleeve is sufficiently expandable so as to enlarge to a larger diameter when a bait is inserted into the open first end of the sleeve while at the same time the sleeve is sufficiently rigid so that the bait is retained in the sleeve by frictional engagement with the interior surface of the sleeve, inserting a portion of bait into the open first end of the sleeve, providing a fishing line having a first end and a second end, the second end is dimensioned to pass through an aperture defined by the second end of the sleeve, coupling the first end of the fishing line to a fishing rod, providing a fishing hook having a line coupling end and a hook end, the hook end is dimensioned to protrude outside of the open first end of the sleeve, coupling the line coupling end of the fishing hook to the second end of the fishing line; and casting the sleeve.

In accordance with still another embodiment of the present invention a method for creating an improved soft artificial bait is disclosed comprising, in combination, the steps of providing a sleeve having an interior surface and an exterior surface and a first end and a second end, the sleeve comprises a mesh-like configuration defining a plurality of apertures, placing the sleeve in a mold for a soft artificial bait, and injecting plastisol into the mold to create a soft artificial bait with said sleeve as a skeleton.

The foregoing and other objects, features, and advantages of the invention will be apparent from the following, more particular description of the preferred embodiments of the invention, as illustrated in the accompanying drawings.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a perspective view of the expandable bait sleeve of the present invention.

Figure 2 is a perspective view of the expandable bait sleeve of Figure 1, showing a bait inserted into the expandable bait sleeve.

Figure 2A is a side, cross-sectional view of a portion of the expandable bait sleeve of Figure 2, taken along line 2a-2a and showing a knot in the fishing line which prevents the hook end of the fishing line from being drawn back through the second end of the expandable bait sleeve.

Figure 3 is a perspective view of an alternative embodiment of the expandable bait sleeve of the present invention, showing a swivel harness, a leader and a treble hook.

Figure 3A is a side, cross-sectional view of the swivel harness of Figure 3, taken along line 3A-3A.

Figure 4 is a perspective view of an alternative embodiment of the expandable bait sleeve of the present invention, showing a fishing hook molded to the second end of the expandable bait sleeve.

Figure 5 is a perspective view of an alternative embodiment of the expandable bait sleeve of the present invention, showing an expandable bait sleeve with an open first end and an open second end and a fishing hook mounted in a center portion of the sleeve.

Figure 6 is a perspective view of an alternative embodiment of the expandable bait sleeve of the present invention, showing a bait inserted into two expandable bait sleeves, each with an open first end and an open second end, so that the bait can be cut into at least two smaller segments.

Figure 7 is a perspective view of an alternative embodiment of the expandable bait sleeve of the present invention, showing the bait sleeve molded into soft artificial bait.

Figure 8 is a side view of an alternative embodiment of the expandable bait sleeve of the present invention, showing the sleeve incorporated into a teaser bait.

Figure 9 is a side view of an alternative embodiment of the expandable bait sleeve of the present invention, showing the sleeve incorporated into a tandem spinner bait.

Figure 10 is a perspective view of an alternative embodiment of the expandable bait sleeve of the present invention, showing the sleeve incorporated into a crank bait.

Figure 10A is a side, cross-sectional view of the expandable bait sleeve of Figure 10.

Figure 11 is a perspective view of an alternative embodiment of the expandable bait sleeve of the present invention, showing the sleeve incorporated into a bucktail spinner.

Figure 12 is a side view of an alternative embodiment of the expandable bait sleeve of the present invention, showing the sleeve incorporated into a spinner.

FIG. 11

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to Figures 1 and 2, the preferred embodiment of the expandable bait sleeve, hereinafter expandable bait sleeve 10, is shown. The expandable bait sleeve 10 comprises a sleeve 12 having an interior surface and an exterior surface and a first end 14 and a second end 16. The first end 14 is open and dimensioned to receive a portion of a bait 18 (shown in Figure 2). The sleeve 12 is sufficiently expandable so as to enlarge to a larger diameter when a bait 18 is inserted into the open first end 14 of the sleeve 12 while at the same time the sleeve 12 is sufficiently rigid so that the bait 18 is retained in the sleeve 12 by frictional engagement with the interior surface of the sleeve 12.

In the preferred embodiment, the sleeve 12 is comprised of polyethylene terephthalate, although it should be clearly understood that substantial benefit could be derived from an alternative configuration of the expandable bait sleeve 10 in which the sleeve 12 is comprised of another material so long as that material imparts to the sleeve 12 flexibility and stretchability sufficient so that the sleeve 12 can expand when a bait 18 is inserted and still retain the bait 18 by means of frictional engagement.

In the preferred embodiment, the sleeve 12 comprises a mesh-like configuration defining a plurality of apertures 20 so that the bait 18 can be seen and smelt by a fish (not shown) while the bait 18 is retained in the sleeve 12, although it should be clearly understood that substantial



benefit could be derived from an alternative configuration of the expandable bait sleeve 10 in which the sleeve 12 is solid without apertures 20.

In the preferred embodiment, the expandable bait sleeve 10 further comprises a fishing line 22 having a first end coupled to a fishing rod (not shown) and a second end 24 dimensioned to pass through an aperture 23 defined by the second end 16 of the sleeve 12. Preferably, the second end 24 of the fishing line 22 passes through the aperture 23 in the second end 16 of the sleeve 12 and is subsequently coupled to a fishing hook 26. The fishing hook 26 has a line coupling end 28 and a hook end 30. The second end 24 of the fishing line 22 is preferably coupled to the line coupling end 28 of the fishing hook 26. In the preferred embodiment, a knot 29 (shown in Figure 2A) is tied in the fishing line 22 to prevent the portion of the fishing line 22 which is coupled to the fishing hook 26 from being pulled back through the second end 16 of the sleeve 12, although it should be clearly understood that substantial benefit could be derived from an alternative configuration of the expandable bait sleeve 10 in which an alternative means for preventing the fishing hook 26 from being pulled through the second end 16 of the sleeve 12 is utilized. In the preferred embodiment, the hook end 30 of the fishing hook 26 protrudes outside of the first end 14 of the sleeve 12, although it should be clearly understood that substantial benefit could be derived from an alternative configuration of the expandable bait

sleeve 10 in which the hook end 30 of the fishing hook 26 protrudes out of a portion of the sleeve 12 between the first end 14 and the second end 16.

Referring now to Figures 3 and 3A, an alternative embodiment of the expandable bait sleeve 10, hereinafter 100, is shown. The expandable bait sleeve 100 (shown in Figure 3) is essentially the same as the expandable bait sleeve 10, although the expandable bait sleeve 100 comprises a swivel harness 132. For this reason, the same reference numbers used in describing the features of the expandable bait sleeve 10 of the preferred embodiment will be used when describing the identical features of the expandable bait sleeve 100. The swivel harness 132 has a first end 134 and a second end 136. The first end 134 of the swivel harness 132 is dimensioned to swivel and is coupled to an outer surface of the second end 16 of the sleeve 12 (shown in Figure 3) and is dimensioned to be coupled to a fishing line 22. The second end 136 of the swivel harness 132 is coupled to an inner surface of the second end 16 of the sleeve 12 and is dimensioned to be coupled to a leader 138. The expandable bait sleeve 100 further comprises a leader 138 having a first end 140 and a second end 142 (shown in Figure 3). The first end 140 is coupled to the second end 136 of the swivel harness 132.

Referring now to Figure 3, the expandable bait sleeve 100 further comprises a fishing hook 126 having a leader coupling end 128 and at least one hook end 130. The leader

coupling end 128 is coupled to the second end 142 of the leader 138 and the at least one hook end 130 is dimensioned to protrude outside of the sleeve 12. In the preferred embodiment of the expandable bait sleeve 100, the fishing hook 126 is a treble hook, although it should be clearly understood that substantial benefit could be derived from an alternative configuration of the expandable bait sleeve 100 in which a fishing hook other than a treble hook is used. In the preferred embodiment of the expandable bait sleeve 100, the leader 138 is made of wire, although it should be clearly understood that substantial benefit could be derived from an alternative configuration of the expandable bait sleeve 100 in which the leader 138 is made of another material.

Referring now to Figure 4, an alternative embodiment of the expandable bait sleeve 10, hereinafter 200, is shown. The expandable bait sleeve 200 is essentially the same as the expandable bait sleeve 10, although the expandable bait sleeve 200 comprises a fishing hook 226 molded to the second end 16 of the sleeve 12. For this reason, the same reference numbers used in describing the features of the expandable bait sleeve 10 of the preferred embodiment will be used when describing the identical features of the expandable bait sleeve 200. The expandable bait sleeve 200 comprises a fishing hook 226 molded into the second end 16 of the sleeve 12 so that a line coupling end 228 of the fishing hook 226 is coupled to an outer surface of the second end 16 of the sleeve 12 and a hook end 230 of the fishing hook 226 is

dimensioned to protrude outside of an upper portion of the sleeve 12 proximate the second end 16 of the sleeve 12.

Referring now to Figures 5 and 6, an alternative embodiment of the expandable bait sleeve 10, hereinafter 300, is shown. The expandable bait sleeve 300 is essentially the same as the expandable bait sleeve 10, although the second end 16 of the expandable bait sleeve 300 is open. For this reason, the same reference numbers used in describing the features of the expandable bait sleeve 10 of the preferred embodiment will be used when describing the identical features of the expandable bait sleeve 300. In the expandable bait sleeve 300, the second end 16 of the sleeve 312 is open so that a bait 18 can be inserted through the open first end 14 of the sleeve 312 and pass through the sleeve 312 so that a portion of the bait 18 protrudes out of the open second end 16 of the sleeve 312.

Referring now to Figure 5, the sleeve 312 of the expandable bait sleeve 300 is preferably coupled to a fishing hook 326. The fishing hook 326 is preferably coupled to a center portion of the sleeve 312 so that a hook end 330 protrudes out of the center portion of the sleeve 312 and a line coupling end 328 dimensioned to be coupled to a fishing line (not shown) protrudes out of the center portion of the sleeve 312.

Referring now to Figure 6, one use for the expandable bait sleeve 300 is to create smaller pieces of bait 18 from a single larger piece of bait 18. A bait 18 can be inserted

through two sleeves 312, and then the bait 18 can be cut into at least two pieces so that each piece is surrounded by a sleeve 312. These smaller pieces of bait 18 can then be attached to fishing hooks 326.

Referring now to Figure 7, an alternative embodiment of the expandable bait sleeve 10, hereinafter 400, is shown. The expandable bait sleeve 400 is essentially the same as the expandable bait sleeve 10, although the sleeve 12 is molded into a soft bait 418. For this reason, the same reference numbers used in describing the features of the expandable bait sleeve 10 of the preferred embodiment will be used when describing the identical features of the expandable bait sleeve 400. The sleeve 12 of the expandable bait sleeve 400 is comprised of a mesh-like configuration defining a plurality of apertures 20. The sleeve 12 is placed in a mold used for creating soft artificial bait 418. Then plastisol is injected into the mold so as to create a soft artificial bait with a sleeve as a skeleton. The sleeve 412 portion of the new combined sleeve 412/soft artificial bait 418 can then be coupled to a fishing hook 26. The fishing hook 26 can then be coupled to a fishing line 22 proximate a second end 16 of the sleeve 412. Although, in the preferred embodiment of the expandable bait sleeve 400, plastisol is injected into the mold for soft artificial bait 418, it should be clearly understood that substantial benefit could be derived from an alternative configuration of the expandable bait sleeve 400 in which a material other than plastisol is used so long as

it imparts to the bait 418 the same qualities of flexibility and stretchability.

Referring now to Figure 8, an alternative embodiment of the expandable bait sleeve 10, hereinafter 500, is shown. The expandable bait sleeve 500 is essentially the same as the expandable bait sleeve 10, although the second end 16 of the sleeve 12 is coupled to a head 550 having a skirt 570. For this reason, the same reference numbers used in describing the features of the expandable bait sleeve 10 of the preferred embodiment will be used when describing the identical features of the expandable bait sleeve 500. The expandable bait sleeve 500 comprises a head 550 coupled to the second end 16 of the sleeve 12. The head 550 defines an aperture 552 in a center portion thereof dimensioned to allow a fishing line 22 to pass therethrough. The expandable bait sleeve 500 further comprises at least one, and preferably two, fishing hooks 26, each having a line coupling end 28 dimensioned to be coupled to a fishing line 22 and a hook end 30 dimensioned to protrude outside of the sleeve 12. The expandable bait sleeve 500 further comprises a skirt 570 having a narrow portion 572 and a wide portion 574. The narrow portion 572 is coupled to the head 550 and the wide portion 574 is dimensioned to cover at least a portion of the sleeve 12. The expandable bait sleeve 500 incorporates the sleeve 12 into what is known in the art as a teaser or a tuna teaser.

Referring now to Figure 9, an alternative embodiment of the expandable bait sleeve 500, hereinafter 600, is shown. The expandable bait sleeve 600 is essentially the same as the expandable bait sleeve 500, although the expandable bait sleeve 600 is coupled to a tandem spinner bait. For this reason, the same reference numbers used in describing the features of the expandable bait sleeve 500 of the preferred embodiment will be used when describing the identical features of the expandable bait sleeve 600. The expandable bait sleeve 600 comprises a head 550 coupled to the second end 16 of the sleeve 12. The expandable bait sleeve 600 comprises a fishing hook 26 having a coupling end 28 dimensioned to be coupled to the head 550 and a hook end 30 dimensioned to protrude outside of the sleeve 12. The expandable bait sleeve 600 further comprises a skirt 570 having a narrow portion 572 and a wide portion 574. The narrow portion 572 is coupled to the head 550 and the wide portion 574 is dimensioned to cover at least a portion of the sleeve 12. The expandable bait sleeve 600 further comprises a substantially L-shaped shaft 670 having a first arm 672 and a second arm 674. The first arm 672 is coupled to the head 550. A center portion 676 of the substantially L-shaped shaft 670 is dimensioned to be coupled to a fishing line 22. The expandable bait sleeve 600 further comprises at least one, and preferably two spinner blades 680 coupled to the second arm 674 of the substantially L-shaped shaft 670. The expandable bait sleeve 600 further comprises at least one,

and preferably two or more beads 690 coupled to the second arm 674 of the substantially L-shaped shaft 670. The expandable bait sleeve 600 incorporates the sleeve 12 into what is known in the art as a tandem spinner bait or spinner bait.

Referring now to Figures 10 and 10A, an alternative embodiment of the expandable bait sleeve 10, hereinafter 700, is shown. The expandable bait sleeve 700 is essentially the same as the expandable bait sleeve 10, although the sleeve 12 is coupled to a crank bait. For this reason, the same reference numbers used in describing the features of the expandable bait sleeve 10 of the preferred embodiment will be used when describing the identical features of the expandable bait sleeve 700. The expandable bait sleeve 700 comprises a crank bait head 702 having a front portion and 704 and a rear portion 706. The front portion 704 is dimensioned to be coupled to a fishing line (not shown) and the rear portion 706 is coupled to the second end 16 of the sleeve 12. The expandable bait sleeve 700 further comprises a first fishing hook 726 (shown in Figure 10) having a first end 728 (shown in Figure 10) coupled to the crank bait head 702 and a second end 730 (shown in Figure 10) comprising at least one hook. The expandable bait sleeve 700 further comprises a wire 738 (shown in Figure 10) having a first end 740 (shown in Figure 10) coupled to the crank bait head and a second end 742 (shown in Figure 10). The expandable bait sleeve 700 further comprises a second fishing hook 776 (shown in Figure 10)



having a wire coupling end 778 (shown in Figure 10) dimensioned to be coupled to the second end 742 of the wire 738 and a hook end 779 (shown in Figure 10) dimensioned to protrude outside of the first end 14 of the sleeve 12. The expandable bait sleeve 700 incorporates the sleeve 12 into what is known in the art as a crank bait.

Referring now to Figure 11, an alternative embodiment of the expandable sleeve 10, hereinafter 800, is shown. The expandable bait sleeve 800 is essentially the same the expandable bait sleeve 600, although the sleeve 12 is coupled to a bucktail spinner. The expandable bait sleeve 800 comprises a harness 832. The expandable bait sleeve further comprises a first fishing hook 826 having a first end 828, a second end 830 and a center portion 829 therebetween. The first end 828 of the first fishing hook 826 is molded to the harness 832 and the center portion 829 of the first fishing hook 826 is coupled to the second end 16 of the sleeve 12. The second end 830 of the first fishing hook 826 comprises at least one hook. The expandable bait sleeve 800 further comprises a skirt 870 having a narrow portion 872 and a wide portion 874. Preferably, the skirt 870 is comprised of the hair of a deer, although it should be clearly understood that substantial benefit could be derived from an alternative configuration of the expandable bait sleeve 800 in which a material other than deer hair is used for the skirt 870. The narrow portion 872 of the skirt 870 is coupled to the harness 832 and the wide portion 874 is dimensioned to cover at least

Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

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to a spinner. For this reason, the same reference numbers used in describing the features of the expandable bait sleeve 800 of the preferred embodiment will be used when describing the identical features of the expandable bait sleeve 900. The expandable bait sleeve 900 comprises a skirt 870 having a narrow portion 872 coupled to the second end 16 of the sleeve and a wide portion 874 dimensioned to cover at least a portion of the sleeve 12. The expandable bait sleeve 900 further comprises a fishing hook 926 having a coupling end 928 and a hook end 930. The coupling end 928 of the fishing hook 926 is coupled to the second end 16 of the sleeve 12 and the hook end 930 is dimensioned to protrude outside of an upper portion of the sleeve 12 proximate the second end 16 of the sleeve 12. The expandable bait sleeve 900 further comprises a shaft 970 having a first end 972 and a second end 974. The second end 974 is coupled to the second end 16 of the sleeve 12 and the first end 972 is dimensioned to be coupled to a fishing line 22. The expandable bait sleeve 900 further comprises at least one spinner blade 980 coupled to the shaft 970. The expandable bait sleeve 900 further comprises at least one bead 990 coupled to the shaft 970. The expandable bait sleeve 900 incorporates the sleeve 12 into what is known in the art as a spinner.

While the invention has been particularly shown and described with reference to preferred embodiments thereof, it will be understood by those skilled in the art that the foregoing and other changes in form and details may be made

therein without departing from the spirit and scope of the invention.